nEnvironmental Impact Assessment Report

Lairdmannoch Energy Park

Chapter 12: Socio-Economics, Tourism and Recreation

Lairdmannoch Energy Park Limited

May 2025

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Glossary of Terms

Term	Definition
The Applicant	Lairdmannoch Energy Park Limited
The Agent	Atmos Consulting Limited
Environmental Advisors and Planning Consultants	Atmos Consulting Limited
Environmental Impact Assessment	Environmental Impact Assessment (EIA) is a means of carrying out, in a systematic way, an assessment of the likely significant environmental effects from a development
Environmental Impact Assessment Regulations	The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (EIA Regulations)
Environmental Impact Assessment Report	A document reporting the findings of the EIA and produced in accordance with the EIA Regulations
The Proposed Development	Lairdmannoch Energy Park
The Proposed Development Site	The full application boundary as per Figure 1-1
Solar Development	The area of the Proposed Development that contains the Solar Arrays and associated infrastructure. As shown on Maps 7, 8 and 9 of Figure 3-1.
Wind Development	The area of the Proposed Development that contains the Wind Turbines and associated infrastructure. As shown on Maps 1, 2 and 4 of Figure 3-1.
Study Area	25km radius from the Proposed Development Site

List of Abbreviations

Abbreviation	Description
D&GC	Dumfries and Galloway Council
EIA	Environmental Impact Assessment
ESJTP	Energy Strategy and Just Transition Plan
GIS	Geographic Information Systems
GVA	Gross Value Added
IEMA	Institute of Environmental Management and Assessment
MW	Mega Watt
NPF4	National Planning Framework 4
NRS	National Records for Scotland
ONS	Office for National Statistics
OnWPS	Onshore Wind Policy Statement
SIMD	Scottish Index of Multiple Deprivation
CAPEX	Capital Expenditure

12 Socio-economics, Tourism and Recreation

12.1 Introduction

This Chapter of the EIA Report assesses the potential socio-economic, tourism and recreation effects, both positive and negative, of the Proposed Development on the surrounding area.

The relevant policy context and methods used to assess the potential effects are described together with the baseline conditions that exist in the area in the absence of the Proposed Development. Potential effects of the Proposed Development are discussed, together with possible cumulative effects in combination with other developments.

12.2 Methodology and Approach

12.2.1 Legislation, Planning Policy and Guidance

There is no relevant legislation or guidance available on the methods that should be used to assess the socio-economic effects of a proposed onshore wind farm or solar development within an EIA.

Similarly, there is no formal guidance on the methods that should be used to assess the effects that wind or solar developments may have on tourism and recreation/leisure interests.

The assessment is based on best practice and draws on experience in assessing the socio-economic, tourism and recreation impacts of onshore wind and solar developments across Scotland.

The following paragraphs summarise relevant policy in relation to socio-economic, tourism and recreation effects. Further detail on planning, energy and climate change policy can also be found referenced in Chapter 4: Planning and Energy Policy.

National Policy

Fourth National Planning Framework (NPF4)

NPF4 was adopted and published by the Scottish Government (2023) on 13th February 2023. NPF4 is the long-term plan that: guides spatial development; specifies national planning policies; designates national developments; and highlights regional spatial priorities.

In addition to setting out an increased emphasis on the 'net zero agenda', the Minister in his foreword to NPF4 states that:

> "*Planning will also play a critical role in delivering the National Strategy for Economic Transformation and in community wealth building.*"

NPF4 sets out clear in-principle support for the development of new renewable energy technologies, with the Intent of the overarching energy policy (Policy 11) being:

> *'To encourage, promote and facilitate all forms of renewable energy development onshore and offshore. This includes energy generation, storage,*

new and replacement transmission and distribution infrastructure and emerging low-carbon and zero emissions technologies.'

Policy 11 (c) notes that:

> *"Development proposals will only be supported where they maximise net economic impact, including local and community socio-economic benefits such as employment, associated business and supply chain opportunities."*

Project design and mitigation for developments in these sectors should address:

> *"public access, including impact on long distance walking and cycling routes and scenic routes".*

The Proposed Development lies within the 'South' area as defined by the NPF4, in the Regional Spatial Priorities section, on page 35. This area is described as having moderate emissions which are partly offset by land use and has significant areas of woodland and peatland which act as carbon sinks.

NPF4 Policy 29 states that *development proposals that contribute to the viability, sustainability and diversity of rural communities and local rural economy will be supported, including;*

i) *v. essential infrastructure*

(Noting that the NPF4 definition of essential infrastructure includes all forms of renewable, low-carbon and zero emission technologies for electricity generation).

Policy 25 (Community Wealth Building) encourages, promotes and facilitates a new strategic approach to economic development that also provides a practical model for building a wellbeing economy at local, regional and national levels.

The policy states:

> *"a) Development proposals which contribute to local or regional community wealth building strategies and are consistent with local economic priorities will be supported. This could include for example improving community resilience and reducing inequalities; increasing spending within communities; ensuring the use of local supply chains and services; local job creation; supporting community led proposals, including creation of new local firms and enabling community led ownership of buildings and assets.*
>
> *b) Development proposals linked to community ownership and management of land will be supported."*

Onshore Wind Policy Statement 2022

The Onshore Wind Policy Statement (OnWPS) 2022 (Scottish Government, 2022) was published on 21st December 2022 and outlines the Scottish Government's ambitions for the Onshore Wind Sector, highlighting how these can be delivered.

The commitment of the Scottish Government to meeting Net Zero targets whilst realising the benefits to local and regional communities is emphasised through the statement that:

> *'The Scottish Government is committed to achieving our climate change targets in a way that maximises the economic and social benefits of a just transition to a net-zero economy."*

The OnWPS details the criteria through which proposals will be evaluated, with a stronger emphasis on the role which wind energy developments can play both in the response to the climate emergency as well as the resulting socio-economic and community benefits, stating that;

> *"The socio-economic benefits of the onshore wind sector in Scotland are widespread, from investment and innovation to skills development and jobs. The latest statistics from the UK Government show that onshore wind in the UK generated £2.4 billion in turnover in 2020 alone."*

The OnWPS notes that;

> *"...Scotland's available land has a variety of demands that we need to balance if we are to meet our net zero targets. We consider the effect that onshore wind farms can have on local and national tourism as a significant opportunity to cultivate a 'people and place' approach and provide economic opportunities in areas that may otherwise be overlooked. The Scottish Government is keen to see more developments in Scotland with similar recreational or community-based provisions.*
>
> *There are already many examples of renewable energy schemes boosting tourism across Scotland, be it Whitelee Wind Farm on the outskirts of Glasgow, providing additional outdoor recreational activities on over 130km of tracks; or the Soirbheas Community Group who reinvest revenue from renewable energy schemes into a range of projects to benefit their communities."*

Chapter 4 of the OnWPS (Benefits to Local Communities and Financial Mechanisms) notes that;

> *"The Scottish Government remains committed to the principles of a just transition to a net zero economy, and that means ensuring that communities across Scotland feel the benefits of this transition. Community benefit and shared ownership can be transformational for the communities who host renewable developments, and we must ensure that industry continue to deliver on these expectations."*

Draft Energy Strategy and Just Transition Plan

The Draft Energy Strategy and Just Transition Plan (ESJTP) was published on 10th January 2023 (Scottish Government, 2023a). The Scottish Government's key ambitions for Scotland's energy future are detailed, as well as "*proposing a vision for a just energy transition*" which provides socioeconomic benefits whilst protecting the environment and providing energy security.

Expanding on the communities and places which can benefit from the net zero energy transition is identified as a key action, with the Scottish Government stating that they are:

> *"...taking forward research into how to accrue maximum economic benefits to Scotland's households, communities and our economy at regional/local and national levels from Scotland's anticipated surplus low carbon energy."*

The draft ESJPT emphasises the Scottish Government's focus on "*collaboration between people from all parts of Scotland and all walks of life*", ensuring that workers, businesses, communities and consumers have all played a key part in forming the draft through early codesign.

Specifically in relation to solar and battery storage development the draft ESJTP states:

> *"We will support the sector to minimise barriers to deployment, aiming to maximise the contribution solar can make to a just, inclusive transition to net zero. We are keen to see the number of solar installations offering community benefits increase and continue to encourage the sector to consider what packages of community benefit it can offer communities local to developments, in line with our Good Practice Principles".*

> *"We see a strong role for solar thermal, as well as domestic and commercial solar PV combined with battery storage systems, which have the potential to help reduce consumer bills".*

The draft ESJPT also states that;

> *"Community and shared ownership of energy provides revenue that can be directly invested back into the local community, and community benefit from renewables projects can make a real and lasting difference to local communities."*

Draft Advice on Net Economic Benefit and Planning

The Draft Advice on Net Economic Benefit and Planning (Scottish Government, 2016) states the importance of demonstrating the net economic benefit of a proposed scheme, highlighting the importance of taking economic benefits into account when determining a planning decision.

The meaning of 'net economic benefit' is described as the difference between the estimated economic position where the development proceeds and the position if the proposal does not go ahead.

Advice is provided on the methodology to be used when modelling economic benefits and acknowledges that;

> "*…assessing the additional benefit from a proposal will usually involve making some assumptions and is therefore not an exact science. It is important that the level of detail of any assessment is kept proportionate to the likely scale of the net economic benefit, and that assumptions made are completely transparent, evidence-based and as accurate as possible".*

National Performance Framework

Scotland's National Performance Framework published in 2018 and last updated in August 2024), sets out the ambitions of the Scottish Government to provide a vision for national wellbeing across a range of economic, social and environmental factors (Scottish Government, 2018). The Scottish Government has committed to a period of reform of the Framework to with the aim to create a framework that better drives public sector reform, improves collaboration between national and local governments and empowers communities. For now, no immediate changes are proposed to the NPF (last updated in August 2024), and the current 11 National Outcomes are still in operation as is the duty on public bodies 'to have regard' to them.

The framework includes 'increased well-being' as part of its purpose and combines measurement of how well Scotland is doing in economic terms with a broader range of well-being measures.

The National Performance Framework is designed to give a more rounded view of economic performance and progress towards achieving sustainable and inclusive economic growth and well-being across Scotland. The stated aims for Scotland are to:

- Create a more successful country;
- Give opportunities to all people living in Scotland;
- Increase the well-being of people living in Scotland;
- Create sustainable and inclusive growth; and
- Reduce inequalities and give equal importance to economic, environmental and social progress.

The National Performance Framework sets out and reports against outcomes and indicators which illustrate the progress Scotland is making in achieving these aims. The Proposed Development has potential to support the achievement of the national outcomes, making a contribution to advancing the development of a competitive, inclusive and sustainable economy in Scotland.

Scotland's National Strategy for Economic Transformation 2022

This is the Scottish Government (2022b) statement of ambition for economic recovery following the COVID-19 pandemic.

It identifies the next ten years as a time of; "*...extraordinary opportunity...*" and promotes Scotland as a nation with competitive advantages in the new industries generated by technological change, scientific advance and our response to the climate and nature crises.

The strategy focuses on five policy programmes with the greatest potential benefit, including to; "*...strengthen Scotland's position in new markets and industries, generating new, well-paid jobs from a just transition to net zero.*"

The transition to net zero is seen not just an environmental imperative but an economic opportunity, one where Scotland will become world leading. The identified opportunities for this competitive advantage include the construction and development of on- and off-shore energy generating technologies.

Fuel Poverty and Cost of Living Crisis

The 2023 Scottish House Condition Survey (Scottish Government, 2023c) identified that in 2023, 34.0% of all households in Scotland were in fuel poverty which is defined as at least 10% of income is spent on heating. In the same year, 19.4% were in extreme fuel poverty. In 2023, fuel poverty in remote rural areas stood at 44%.

A recent Scottish Parliament statement (Scottish Parliament, 2023) provided an estimate of the increased number of households in fuel poverty:

> *"This modelling estimates that from October 2022 there are around 860,000 households (35%) in fuel poverty in Scotland. This is an increase of 247,000 households or around 10 percentage points from the latest available 2019 SHCS statistics, which showed 613,000 households in fuel poverty (25%). With the increase in the Energy Price Guarantee to £3,000 in April 2023 we estimate that around 980,000 households (39%) in Scotland will be in fuel poverty. While these modelled estimates are not available at Local Authority level, the large increases in the fuel poverty rate will be reflected across each Local Authority in Scotland."(Scottish Parliament, 2023)*

National Energy Security

There is a drive to reduce UK dependence on fossil fuels and boost the sources of green energy for better energy security in the long-term which is set out within the British Energy Security Strategy (Department for Energy Security and Net Zero, 2022).

Regional Policy

Dumfries and Galloway Local Development Plan 2

Dumfries and Galloway Local Development Plan 2 (LDP2) was adopted in 2019 and notes:

> *4.2 - "Sustainable economic growth is a key element of the Plan's vision. Dumfries and Galloway is primarily a rural economy with agriculture, forestry, tourism and food processing being important sectors. A new and increasingly significant part of the area's economy is generation of renewable energy. The policies set out in the Plan provide opportunities to grow, develop, diversify and regenerate the economy in a sustainable manner whilst at the same time protecting the natural and built environment upon which so much of the region's economy depends."*

And

> *4.8 - "Tourism is a key sector within Dumfries and Galloway's economy. The quality of tourism attractions, facilities and accommodation is integral to the performance of this sector. Planning has an important role of supporting the tourism economy throughout Dumfries and Galloway, whilst safeguarding the tourism assets of the region and ensuring sites are suitably serviced".*

Dumfries and Galloway Council Plan 2023-2028

In February 2023, Dumfries and Galloway Council (D&GC) published a 5 year plan with a vision to build a natural place to live, work, visit and invest. The key driver principals for the plan outlined are:

- Safeguard future by addressing the climate emergency, protecting the natural capital;
- Support the citizens by putting the customers at the heart of service, supporting the vulnerable, addressing inequalities and enhance potential for digital technologies in services;
- Support communities by empowering, increase the partnership opportunities, encourage the investments, and focusing on the local planning and delivery; and
- Be a responsive organisation by communicating openly, maintain the finance and spending, organised, and ensuring effective management of the resources.

A number of strategies, plans and policies are in place to help D&GC deliver the vision. Each year D&GC produces an action plan which sets out how the council intends to achieve its strategic outcomes for the year ahead.

South of Scotland Regional Economic Strategy 2021-2031

The strategy sets out a bold vision for the South of Scotland to be Green, Fair and Flourishing by 2031 with a vision that:

> *"We will be a region of opportunity and innovation- where natural capital drives green growth, ambition and quality of life rivals the best in the UK, communities are empowered and cultural identify is cherished enabling those already here to thrive and attracting a new generation to live, work, visit, learn and invest in South of Scotland".*

The strategy has six themes:

- Skills and ambitious people;
- Innovative and enterprising;
- Reward and fair work;
- Cultural and creative excellence;
- Green and sustainable economy; and
- Thriving and distinct communities.

Theme 3: Rewarding & Fair Work sets out the following priorities against Growing and Diversifying the Economy:

> *"The region has considerable sectoral strengths, including in agriculture, forestry, manufacturing, generation of renewable energy, creative industries, human health and social care, tourism and accommodation, and food services; all of which will be built upon through investment and support, creating more secure and fulfilling jobs."*

Theme 5: Green and sustainable economy sets out the following priorities against Harnessing & Enhancing Natural Capital:

> *"The region has made progress in managing its resources in a more sustainable way, implementing better land management, decarbonising farming, forestry and fishing processes and generating more renewable energy, but there is scope for this to and we will go further – and the South to be seen as pioneering so that more is made of our natural capital whilst preserving and enhancing it".*

Tourism Policy Context

In terms of relevant tourism policy, the Scottish Tourism Alliance developed The National Tourism Strategy 2030 'Scotland Outlook 2030' (Scottish Tourism Alliance, 2020) which confirms the importance of tourism to Scotland's economy and emphasises the resilience of the tourism industry since the start of the Covid-19 pandemic in 2020.

The strategy cautions that Scotland must remain competitive, by developing and changing its products and marketing in order to improve the quality of the customer experience and increase sales.

The vision of the National Tourism strategy is to:

> *'Together we will grow the value and positively enhance the benefits of tourism across Scotland by delivering the very best for our visitors, our businesses, our people, our communities and our environment.'*

VisitScotland is not a statutory consultee on planning applications and have stated that they understand and support the drive for renewable energy and recognises the economic potential of Scotland's resources, including the opportunities for wind farm development.

VisitScotland's Position Statement on Wind Farms states that there is a mutually supportive relationship between renewable energy developments and sustainable tourism. They acknowledge that some groups are concerned by the potential impact of wind farm developments on tourism; however, the position statement states that independent research; *'…suggests that wind farms have a limited impact on visitors' decisions to holiday in Scotland'*.

VisitScotland has not released a formal position statement specifically addressing solar farms or battery energy storage systems.

Scotland Outlook 2030 has been developed by Scottish Tourism Alliance, the Scottish Government, VisitScotland, Scottish Enterprise, Highlands and Islands Enterprise, and Skills Development Scotland. Over 2,500 tourism leaders and stakeholders from the Scottish tourism industry have contributed to its development.

The four key priorities of Scotland Outlook 2030 are:

> *"Our Passionate People - We will attract, develop and retain a skilled, committed, diverse and valued workforce;*
>
> *Our Thriving Places - We will create and develop a sustainable destination together;*
>
> *Our Memorable Experiences – We will provide the very best, authentic and memorable experiences; and*
>
> *Our Diverse Businesses – We will build business resilience, sustainability and profitability."*

12.2.2 Consultation

The assessment process has been informed by consultation with the Energy Consents Unit, Dumfries and Galloway Council and relevant stakeholders including the Pre-Application Enquiry Response dated 7th April 2021 and Scoping Opinion dated 18th January 2024.

A summary of the key consultation responses in relation to socio-economic issues is presented in **Table 12-1.**

Table 12-1: Consultation

Consultee	Pre-application Comment	Scoping Comment	Where addressed within this Report
Dumfries and Galloway Council - Environmental Health Officer	None.	The EIA should consider and assess impacts on the local public/core path resource, which includes a number of paths that are adjacent to the proposed development. It should identify mitigation in relation to impacts on this resource.	Potential impacts on the local public/core path resource including mitigation measures are detailed in Section 12.6 below.

12.2.3 Assessment Methodology

The methods applied within this assessment are based on established best practice, including methods from UK Government and industry reports.

The assessment has employed appraisal techniques consistent with environmental impact guidance published by the Institute of Environmental Management and Assessment (IEMA, 2016) and has drawn on analysis and assumptions in research published by Renewable UK in 2012, Onshore Wind: Direct & Wider Economic Impacts (Renewable UK, 2012).

Consideration has been given to:

- The 2019 Renewable UK Report 'Quantifying the benefits of onshore wind to the UK' (Renewable UK, 2019); and
- The 2015 Building Research Establishment (BRE) 'Planning Guidance for the Development of Large-scale Ground Mounted Solar PV Systems' (Building Research Establishment, 2015).

The methodology adopted in this assessment has involved the following key stages:

- Consideration of the relevant baseline;
- Review of the Proposed Development for potential impacts;
- Evaluation of significance;
- Identification of mitigation measures, where required; and
- Assessment of residual impacts.

The scale of significance described below has been used to assess the potential and residual impacts of the Proposed Development against baseline conditions. The assessment process aims to be objective and quantifies impact as far as possible; however, some impacts can only be evaluated on a qualitative basis:

- **Negligible or No effect**: Either no change or no detectable change to a location, environment or sensitive receptor;
- **Minor**: A detectable but non-material change to a location, environment or sensitive receptor;
- **Moderate**: A material, but non-fundamental change to a location, environment or sensitive receptor; and
- **Major**: A fundamental change to a location, environment or sensitive receptor or in breach of recognised legislation, policy or standards.

In assessing significance, consideration is given to the national, regional and local baseline situation. The magnitude of the effect is determined in proportion to the area of effect relevant to each receptor. For the purpose of the assessment, a moderate or major effect is deemed to be 'significant' in terms of the EIA Regulations.

In terms of socio-economic factors, potential effects would be significant if the Proposed Development resulted in fundamental or material changes in population, structure of the local community or local economic activity.

The effect of the Proposed Development on tourism and recreation is closely related to public attitudes to wind farms, however, a negative opinion does not necessarily result in a material change in recreational patterns. The relevant conclusions from the most recent studies are discussed later in this Chapter.

Limitations

The research analysis used in the methodology (Renewable UK, 2012) considers the economic effects of onshore wind development. As of writing there is a lack of available literature on the socio-economic impacts of solar farms and battery energy storage systems (BESS).

This assessment contains an analysis of the Proposed Development and its effects at generating jobs and Gross Value Added (GVA) into the economy at different spatial levels. However, this analysis only considers the Wind Development due to the lack of aforementioned literature on solar farms and BESS.

As such, this assessment should be looked at as a conservative estimate on the number of jobs and GVA that the Proposed Development will generate. As both the Solar Development and BESS will generate jobs and GVA but neither can be quantified at this time.

There are no official figures for Dumfries and Galloway's Gross Domestic Product (GDP). However official figures exist for Dumfries and Galloway's Gross Value Added (GVA) which is a component of GDP and will be used as a proxy in this assessment (Skills Development Scotland, 2025).

Spatial Scope

The spatial scope of the assessment of socio-economic effects is represented by the study areas of Dumfries and Galloway Council Area, Scotland, the United Kingdom, and Internationally (Rest of the World).

The study area for effects on tourism and recreation cover up to a 25km radius from the Proposed Development Site. This is in line with the **Chapter 5 Landscape and Visual** focussed study area for assessment.

Temporal Scope

The temporal scope of the socio-economic assessment is during the following phases:

- Development, including project development, legal and financial, planning and Environmental Impact Assessment costs;
- Construction; and
- Operational and maintenance.

Effects associated with the construction phase of the Proposed Development are considered to be temporary and short-term. Effects associated with the operational phase of the Proposed Development are considered as long-term.

Accordingly, tourism and recreation effects are considered based on the operational phase of the Proposed Development. Development and construction effects are scoped out of the assessment due to their short-term nature.

Very few onshore wind or solar projects to date have been fully decommissioned in the UK and, as a result, there is minimal data regarding the economic costs and impacts associated with this phase, however, any potential effects are considered likely to be similar to the construction phase.

12.3 Baseline Conditions

A review of publicly available information has been undertaken to identify the key characteristics of the local economy, existing land use and tourism and recreational facilities in the Dumfries and Galloway Council area. Sources include:

- Office for National Statistics (ONS);
- National Records of Scotland (NRS);
- Scottish Index of Multiple Deprivation (SIMD); and
- VisitScotland.

The baseline socio-economic profile of the study area covers the aspects of:

- Population;
- Economic activity and employment;
- Deprivation; and
- Tourism and recreation.

12.3.1 Population

In 2023, the Dumfries and Galloway Council area had a population of 145,670 accounting for 2.65% of Scotland's total 2023 population.

Table 12-2, Population Structure, illustrates that the population of Dumfries and Galloway Council and the national population.

The region has a lower average share of the population younger than 16 (15% compared to 16.3%) and of working age (57.3% compared to 63.4%) to that of the national population. The region has a higher average share of the population of pensionable age (27.7% compared to 20.3%).

Table 12-2: Population Structure (2023)

	Dumfries and Galloway	Scotland
Total Population	145,670	5,490,100
% under 16	15.0%	16.3 %
% of working age (16 to 64)	57.3%	63.4%
% of pensionable age (65 and over)	27.7%	20.3%

Source: National Records of Scotland (2023). Mid Year Population Estimates Time Series Data

Future Baseline

During the construction and operation period of the Proposed Development the population of the study areas is expected to change.

According to the latest population projections for Scotland (National Records of Scotland, 2020), the population of Dumfries and Galloway is projected to decrease over the period leading up to 2043. However, the working-age population is anticipated to remain within a similar range, though still lower than the national average.

By 2028, Dumfries and Galloway's total population is expected to be approximately 144,575, decreasing to 136,286 by 2043 (NRS, 2020). During this period, the proportion of the working-age population (16 to 64 years) is projected to decline from 56.0% in 2028 to 53.0% in 2043, significantly below the national average of 60.3% by 2043. In contrast, the percentage of people of pensionable age (65 and over) is forecasted to rise from 30.1% in 2028 to 33.7% in 2043, which is notably higher than the national figure of 24.9%.

Additionally, the proportion of those under 16 is expected to remain relatively stable at 13.2% in Dumfries and Galloway by 2043, compared to 14.8% nationally.

Table 12-3: Population Projections – 2028

	Dumfries and Galloway			Scotland		
	2028	2038	2043	2028	2038	2043
Total Population*	144,575	139,086	136,286	5,537,116	5,573,181	5,574,819
% under 16	13.9%	13.2%	13.2%	15.6%	14.8%	14.8%
% of working age (16 to 64)	56.0%	52.6%	53.0%	62.3%	60.2%	60.3%
% of pensionable age(65 and over)	30.10%	34.2%	33.7%	22.1%	25.0%	24.9%

**Source: National Records of Scotland (2020).- Population Projections for Scottish Areas (2018-based)*

12.3.2 Economic Activity and Employment

As shown in Table 12-4, the economic activity rate for the Dumfries and Galloway Council area is higher than that of the national average (at 78.7% compared to the Scottish average of 76.6%).

Dumfries and Galloway has a lower unemployment rate to Scotland as a whole, at 2.7% compared to 3.3%.

Wages in the region are lower, with full-time working residents of Dumfries and Galloway typically making a median weekly gross wage of £682, compared to the Scottish average of £740.

Table 12-4: Employment and Unemployment (October 2023 – September 2024)

	Dumfries and Galloway	Scotland
Economically Active	78.7%	76.6%
Employed	76.8%	74.0%
Unemployed (model-based)	2.7%	3.3%
Median Gross Weekly Income (£)*	£682	£740

Source: ONS, Labour Market Profile – Dumfries & Galloway - Labour Supply – Employment and unemployment (October 2023 – September 2024). Annual population survey

**Source: ONS, Labour Market Profile – Dumfries & Galloway – Earnings by place of residence (2024). Annual Survey of hours and earnings – resident analysis.*

Employment by Occupation

In terms of the nature of employment in the Dumfries & Galloway Council area, **Table 12-5** shows that the region has an above average proportion of the workforce employed in the Wholesale and Retail Trade at 16.1% compared to 13.3% in Scotland, Accommodation and Food Services industry at 10.7% of the work force compared to 8.8% in Scotland and Human Health and Social Work industry at 19.6 compared to 16.2% across Scotland.

The region has a slightly below average share of employees working in the construction sector, accounting for approximately 4.5% of the workforce. This is equivalent to approximately 2,500 jobs. The construction sector is an area of employment that would be positively impacted by the Proposed Development should local workers and suppliers be utilised in the construction phase.

Employment in the Transportation and Storage sector accounts for a higher share of the workforce than for Scotland as a whole, with 5.4% of the population employed in Dumfries and Galloway in contrast to the 4.6% of the population of Scotland.

Table 12-5: Jobs by Industry (2023)

	Dumfries and Galloway	Scotland
Wholesale and Retail Trade; repair of Motor Vehicles and Motorcycles	16.1%	13.3%
Accommodation And Food Services	10.7%	8.8%
Education	8.9%	8.5%
Human Health and Social Work Activities	19.6%	16.2%
Administrative and Support Service Activities	5.4%	7.0%
Construction	4.5%	5.1%
Professional, Scientific and Technical Activities	4.5%	7.3%
Public Administration and Defence; Compulsory Social Security	4.5%	6.5%
Manufacturing	8.9%	7.0%
Information and Communication	0.9%	3.2%
Arts, Entertainment and Recreation	2.7%	2.8%

	Dumfries and Galloway	Scotland
Financial and Insurance Activities	0.7%	3.3%
Transportation and Storage	5.4%	4.6%
Real Estate Activities	1.6%	1.4%
Other Service Activities	1.6%	1.7%
Water Supply; Sewerage, Waste Management and Remediation Activities	1.2%	0.8%
Mining and Quarrying	0.1%	1.0%
Electricity, Gas, Steam and Air Conditioning Supply	0.5%	0.8%

Source: ONS, Labour Market Profile – Dumfries & Galloway - Labour Supply – Employee jobs by industry (2023) Business Register and Employment Survey.

12.3.3 Deprivation

The Scottish Index of Multiple Deprivation (SIMD) is a relative measure of deprivation which ranks each small area of Scotland in terms of deprivation across the domains of income, employment, education, health, access to services, crime and housing.

These areas can be ranked by quintiles (one fifth shares), with a small area in the first quintile being in the 20% most deprived areas in Scotland.

There are 201 small areas in Dumfries and Galloway, of which 9% are ranked in the most deprived quintile (Scottish Government, 2020b). As shown in Table 12-6, the majority of households in Dumfries and Galloway are ranked in the 2nd, 3rd and 4th quintiles, accounting for 82% of small areas in the region.

This suggests that the region, as a whole, is neither overly deprived nor overly affluent in regards to the domains considered in the analysis.

Table 12-6: Scottish Index of Multiple Deprivation by Quintile, 2020

	Dumfries and Galloway
1 (Most Deprived Quintile)	9%
2	24%
3	38%
4	20%
5 (Least Deprived Quintile)	8%

Source: Scottish Government (2020b).

Fuel poverty represents household deprivation in terms of the proportion of income a household spends on fuel; when this is more than 10% a household is said to be in fuel poverty.

The Dumfries & Galloway Council area has a fuel poverty rate of ~28% compared to 34.0% of Scottish households according to the House Condition Survey 2019 (Scottish Government 2019), this is the most up to date survey which provides this data broken down by council area.

Extreme fuel poverty is defined as a household that would have to spend more than 20% of its adjusted net income on total fuel costs to maintain a satisfactory heating regime (House Condition Survey 2023, Scottish Government). In 2019 the extreme fuel poverty in D&GC was ~15% compared to the Scottish rate of 12%. These figures may

have increased since the 2019 data was published given the cost of living crisis, these are the most up to date figures to include the individual Council Areas.

12.3.4 Tourism and Recreation Indicators

Tourism and recreation are substantial contributors to the economy of Scotland. Benefits include cash flows into a range of businesses, extending beyond accommodation, restaurants and visitor attractions.

Taxis and public transport, village shops, craft workers and country estates are among the list of those receiving direct business. Local trades are also boosted through purchases by businesses and improvements to premises stimulated by tourism.

Sustainable tourism is one of the six economic sectors identified by the Scottish Government as growth sectors in its previous economic strategy. In 2022, the sustainable tourism sector in the Dumfries and Galloway Council area accounted for 7000 jobs and accounted for £188.5 million GVA as shown in Table 12-7. This represented 2.86% of Scotland's total employment in the sector and 2.47% of the country's total GVA generated by the sector.

Table 12-7: GVA Employment in the and Sustainable Tourism Sector

	Dumfries and Galloway	Scotland
GVA (£ million)	118.5	4,803
Employment (jobs)	5,900	216,100

Source: Scottish Government: Scottish Annual Business Statistics (2022)

Local Attractions

The Dumfries and Galloway Council area has a rich and diverse range of attractions, famous for its history and scenery.

In 2023 there were 490,000 tourism nights spent in Dumfries and Galloway and a total overnight tourism spend of £133 million (VisitScotland, 2023).

Table 12-8: International Tourism Performance 2023

	Dumfries and Galloway	Scotland
Visits	44,000	4,000,000
Spend (£M)	133	3,493,000
Nights	490,000	34,400,000

Source: VisitScotland (2023)

The most visited tourist attractions in the Dumfries and Galloway Council area are displayed in **Table 12-9**, alongside the approximate distance from the Proposed Development.

Table 12-9: Most visited tourist attractions in the Study Area

Attraction	Number of Visitors (2023)	Approx. driving distance from the Proposed Development
Threave Gardens	54,057	20km
Broughton House and Garden	11,189	15km

Source: Association of Leading Visitor Attractions (2023)

Local Recreational Paths and Trails

Walking, hiking and cycling are popular pursuits in Dumfries and Galloway. One of the most well-known routes in the region is the Southern Upland Way, located approximately 20km north of the Proposed Development. This Great Trail spans 214 miles, beginning in Portpatrick on the south-west coast and ending at Cockburnspath in the east. While there are no summits over 3,000 feet, more than 80 peaks exceed 2,000 feet.

Core path 'Gatehouse to Glengap' (reference TWYN/18/17) follows the route of the proposed southwestern access track from the entrance to the Site (the junction of the existing forestry track with the B727 to the east of Gatehouse of Fleet) to the point where the proposed access track leaves the route of the existing forestry track to turn north towards the main site infrastructure.

Recreational routes include core paths providing access to moorland and forest areas and the National Cycle Network Route (NCNR) 7 which comes within 5.6km west of the windfarm infrastructure as it progresses along the B796.

12.4 Assessment of Effects

Capital and Operational Expenditure (Spend)

The assessment of the generation of employment opportunities, and Gross Value Added (GVA) has been undertaken based on the Renewable UK research, (Renewable UK, 2012). The capital and operational expenditure (spend) for the Proposed Development have been estimated using the methodology in this research.

Table 12-10 provides a summary of average spend per MW installed for each of the development, construction and operational phases of UK wind farms, drawn from the research study.

It is important to acknowledge that significant inflation has occurred since this research was published in 2012, meaning the values contained in the research whilst accurate, require inflation adjustment if the figures are to be accurate to present day levels. As such, all Renewable UK values will be shown as inflation adjusted to 2025, using the Bank of England's inflation calculator which tracks the Consumer Price Index (Bank of England, 2025).

Table 12-10: Weighted Average Spend per MW on Windfarms in the UK

Project phase	Weighted Spend per MW
Development	£150,646
Construction	£750,016
Operation per annum	£67,453

Source: Renewable UK (2012) – 2025 inflation adjusted, rounded

The total Capital Expenditure (CAPEX) for the Wind Development (60MW) including both development and construction phases, and across its 40 year operational period, is estimated to be £215.9 million (£215,926,920), as per Table 12-10 above.

It is also worth noting that the Proposed Development includes:

- Battery storage (with a capacity of 20MW) - based on an estimated capital cost for battery storage of £312,000 per MW[1] in 2025 (IEA, 2019) this would result in a CAPEX of £6,240,000; and
- Solar development (with a capacity of 20MW) – based on an estimated £0.96 million per MW in 2019 (Renewable Energy Foundation, 2023) this would result in a CAPEX expenditure of £19,200,000.

In total, CAPEX, for the development, construction and operation of the Proposed Development, including the wind, solar and battery storage across the 40 year operational period is projected to be approximately £241.3 million (£241,366,920).

Predicted Development Phase Effects

Wind Development

As shown in Table 12-10 above, the average inflation adjusted weighted spend in the UK during the development phase of a wind farm is £150,646 per MW (RenewableUK, 2012 & Bank of England, 2025).

Applying this assumption to the Proposed Development with an indicative maximum generating capacity of 60MW from wind generation only, results in an estimated total spend of £9,038,736 in the UK during the development phase.

Renewables UK defines the 'Development Phase' as including project design, environmental studies, legal agreements, project funding and planning permissions (RenewableUK, 2012).

On the average UK windfarm, the following development costs are spent on each regional area, all shown as inflation adjusted weighted spend per MW (Renewable UK, 2012 & Bank of England, 2025):

- Total - £154,087 (100% of spend);
  - International - £3,441 (2.2% of total spend);
  - UK - £150,646 – (97.8% of total spend);
    - Regional/National - £63,361 (41.1% of total spend); and
    - Local - £12,385 (8% of total spend).

The above statistics are applied to the Wind Development aspect of the Proposed Development in Table 12-11 below:

Table 12-11: Weighted Average Development Spend on the Wind Development

Area	Weighted Spend (£)	Percentage (%) of Spend
Total	**£9,245,220**	**100%**
International	£206,460	2.2%
UK	£9,038,760	97.8%
Scotland (Regional/National)	£3,801,660	41.1%

[1] Please note the IEA gives the value in dollars per KW. The conversion of $415 per KW is equal to £312 (plus rounding) at the time of this assessment (26/04/2025). This equates to approximately £312,000 per MW.

Area	Weighted Spend (£)	Percentage (%) of Spend
Dumfries and Galloway (Local)	£743,100	8%

Source: Renewable UK, 2012 – Inflation Adjusted, rounded

The Renewable UK research indicates there is an average of one employee for every £144,511 of inflation adjusted turnover, with an average turnover to GVA rate of 62.5% during the development phase (Renewable UK, 2012 & Bank of England, 2025).

On this basis, and comparing against the weighted development spend in Table 12-11 above, it is estimated in total across all spatial areas, up to 63 jobs will be generated during the development phase of the Wind Development with a total GVA of approximately £5.7 million (£5,778,263) generated.

Up to 62 of these jobs would be created within the UK, and approximately £5.6 million (£5,649,225) being generated in the UK economy. Within Scotland, the development phase of the Wind Development is expected to generate up to 26 of these jobs, with an approximate GVA of £2.3 million (£2,376,038). Within Dumfries and Galloway, up to 5 jobs are estimated to be generated during the development phase of the Wind Development, with an approximate GVA locally of £464,438.

Level of Effect

Scotland's Gross Domestic Product (GDP) in 2024 was reported at £223.4 billion including oil and gas extraction in Scottish waters (Scottish Government, 2025). There are no official figures for Dumfries and Galloway's GDP. However official figures exist for Gross Value Added (GVA) which is a component of GDP and the 2024 figures will be used as a proxy in this assessment. Dumfries and Galloway's total GVA for the region is estimated to comprise 2.4% of Scotland's GVA (Skills Development Scotland, 2025).

The predicted level of effect from the development phase, in spend and employment and GVA, is considered to be a negligible beneficial effect for Scotland's economy (Regional/National), and negligible to minor beneficial effect for Dumfries and Galloway's economy (Local).

The Solar Development and BESS will add jobs and GVA but cannot be accurately quantified, however during the development phase therefore a negligible beneficial effect is anticipated for the UK's, Scotland's (Regional/National), and Dumfries and Galloway's (Local) economies.

Predicted Construction Phase Effects

Wind Development

As shown in Table 12-10, the average inflation adjusted weighted spend in the UK during the construction phase of a wind farm is £750,017 per MW (Renewable UK, 2012 & Bank of England, 2025).

Applying this assumption to the Proposed Development with a potential maximum wind generating capacity of 60MW from wind generation only, results in an estimated total spend of £45 million (£45,001,020) during the construction phase.

Renewables UK defines the 'Construction Phase' as including site preparation, manufacture and installation of wind turbines, balance of plant, and connection to the grid (RenewableUK, 2012).

On the average UK windfarm, the following construction costs are spent on each regional area, all shown as inflation adjusted weighted spend per MW (Renewable UK, 2012 & Bank of England, 2025):

- Total - £1,675,495 (100% of spend);
  - International - £925,478 (55.2% of total spend);
  - UK - £750,017 (44.8% & of total spend);
    - Regional/National - £486,812 (29.1% of total spend); and
    - Local - £109,432 (6.5% of total spend).

The above statistics are applied to the Wind Development aspect of the Proposed Development in Table 12-12 below:

Table 12-12: Weighted Average Construction Spend on the Wind Development

Area	Weighted Spend (£)	Percentage (%) of Spend
Total	**£100,529,700**	**100%**
International	£55,528,680	55.2%
UK	£45,001,020	44.8%
Scotland	£29,208,720	29.1%
Dumfries and Galloway	£6,565,920	6.5%

Source: Renewable UK, 2012 – 2025 inflation adjusted, rounded

The Renewable UK research indicates there is an average of one employee for every £210,094 of inflation adjusted turnover, with an average turnover to GVA rate of 39.1% during the construction phase (Renewable UK, 2012 & Bank of England, 2025).

On this basis, and comparing against the weighted construction spend in Table 12-12 above, it is estimated in total across all spatial areas, up to 478 jobs will be generated during the construction phase of the Wind Development with a total GVA of approximately £39.3 million (£39,307,113) generated.

Up to 214 of these jobs would be created within the UK, and approximately £17.5 million (£17,595,398) being generated in the UK economy. Within Scotland, the development phase of the Wind Development is expected to generate up to 139 of these jobs, with an approximate GVA of over £11.4 million (£11,420,610). Within Dumfries & Galloway, up to 31 jobs are estimated to be generated during the construction phase of the Wind Development, with an approximate GVA locally of £2.5 million (£2,567,274).

Level of Effect

Scotland's Gross Domestic Product (GDP) in 2024 was reported at £223.4 billion including oil and gas extraction in Scottish waters (Scottish Government, 2025). There are no official figures for Dumfries and Galloway's GDP. However official figures exist for Gross Value Added (GVA) which is a component of GDP and the 2024 figures will be used as a proxy in this assessment. Dumfries and Galloway's total GVA for the region is estimated to comprise 2.4% of Scotland's GVA (Skills Development Scotland, 2025).

The predicted level of effect from the construction phase, in spend and employment and GVA, is considered to be a negligible beneficial effect for the UK's economy.

The predicted level of effect from the construction phase, in spend and employment and GVA, is considered to be a negligible to minor beneficial for Scotland's economy (Regional/National), and a negligible to minor beneficial effect for Dumfries and Galloway's economy (Local).

The Solar Development and BESS will add jobs and GVA but cannot be accurately quantified, however during the construction phase a negligible beneficial effect is anticipated for the UK's economy. A negligible to minor positive effect is anticipated for both Scotland's (Regional/National) and Dumfries and Galloway's (Local) economies.

Predicted Operational Phase Effects

Wind Development

As shown in Table 12-10, the average inflation adjusted weighted spend in the UK during the operational phase of a wind farm is £67,452 per MW per annum (Renewable UK, 2012 & Bank of England, 2025).

Applying this assumption to the Proposed Development with a potential maximum wind generating capacity of 60MW from wind generation only, results in an estimated total spend of £4 million per annum (£4,047,120), totalling £161.8 million (£161,884,800) across the 40 year operational phase.

Renewables UK defines the 'Operational Phase' as including maintenance and operation of the wind turbines and the wider site (RenewableUK, 2012).

On the average UK windfarm, the following operational costs are spent on each regional area, all shown as weighted spend per MW per annum (Renewable UK, 2012 & Bank of England, 2025):

- Total - £74,606 (100% of spend);
  - International - £7,153 (9.5% of total spend);
  - UK - £67,453 (90.4% & of total spend);
    - Regional/National - £48,475 (65% of total spend); and
    - Local - £21,508 (28.8% of total spend).

The above statistics are applied to the Wind Development aspect of the Proposed Development in Table 12-13 below:

Table 12-13: Weighted Average Operational Spend on the Wind Development per Annum

Area	Weighted Spend per Annum (£)	Percentage (%) of Spend
Total	**£4,476,360**	**100%**
International	£429,180	9.5%
UK	£4,047,180	90.4%
Scotland	£2,908,500	65%
Dumfries and Galloway	£1,290,480	28.8%

Source: Renewable UK, 2012 – 2025 inflation adjusted, rounded

The Renewable UK research indicates there is an average of one employee for every £280,521 of inflation adjusted turnover, with an average turnover to GVA rate of 50.8% during the operational phase (Renewable UK, 2012 & Bank of England, 2025).

On this basis, and comparing against the weighted operational spend in Table 12-13 above, it is estimated in total across all spatial areas, up to 15 jobs will be generated during the operational phase of the Wind Development with a total GVA of approximately £2.2 million (£2,273,991) generated.

Up to 14 of these jobs would be created within the UK, and approximately £2 million (£2,055,967) being generated in the UK economy. Within Scotland, the operational phase of the Wind Development is expected to generate up to 10 of these jobs, with an approximate GVA of over £1.4 million (£1,477,518). Within Dumfries & Galloway, up to 4 jobs are estimated to be generated during the operational phase of the Wind Development, with an approximate GVA locally of £655,564.

Level of Effect

Scotland's Gross Domestic Product (GDP) in 2024 was reported at £223.4 billion including oil and gas extraction in Scottish waters (Scottish Government, 2025). There are no official figures for Dumfries and Galloway's GDP. However official figures exist for Gross Value Added (GVA) which is a component of GDP and the 2024 figures will be used as a proxy in this assessment. Dumfries and Galloway's total GVA for the region is estimated to comprise 2.4% of Scotland's GVA (Skills Development Scotland, 2025).

The predicted level of effect from the operational phase, in spend and employment and GVA, is considered to be a negligible beneficial effect for the UK's, Scotland's (Regional/National) and Dumfries and Galloway's economies (Local).

The Solar Development and BESS will add jobs and GVA but cannot be accurately quantified, however during the operational phase a negligible beneficial effect is anticipated for the UK's, Scotland's (Regional/National) and Dumfries and Galloway's (Local) economies.

Wider Socio Economic Effects

The Proposed Development is expected to generate a range of economic benefits beyond direct construction and operational opportunities including:

- Supporting Policy Objectives;
- Local Supply Chain Opportunities;
- Worker Expenditure;
- Pre-Construction Benefits;
- Income Effects;
- Exchequer Effects;
- Community Investments & Property Assets;
- Cumulative Economic Impact; and
- Land Management & Ecological Enhancements.

Community Benefit Fund Expenditure and Community Shared Ownership

Renewable energy in Scotland presents an unprecedented opportunity for communities to share in the benefits of their local energy resources.

In relation to the Proposed Development, the relevant policy is contained in the Good Practice Principles for Community Benefits from Onshore Renewable Energy Developments (Scottish Government, 2019a), Onshore Wind Policy Statement (OnWPS) (Scottish Government, 2022a) and the Building Research Establishment National Solar Centre's Planning Guidance for the Development of Large-scale Ground Mounted Solar PV Systems.

One of the key principles of national guidance is the promotion of a national rate for voluntary community benefits for onshore wind equivalent to £5,000 per MW installed generating capacity per year, index linked for the operational lifetime of the development for community benefits packages.

The Applicant recognises that the BRE National Solar Centre's Planning Guidance for the Development of Large-scale Ground Mounted Solar PV Systems (2015) notes the importance of Community Benefits. It advises that a bespoke voluntary community benefit package should be explored where possible. The Applicant is proposing £500 per MW on installed solar capacity per year.

The Proposed Development will have an indicative electricity export output of approximately 60MW from wind generation and 20MW from solar.

The Applicant is adhering to the best practice recommendation and proposing a community benefit package of up to £310,000 per annum or £12.4 million over the 40 year operational period of the Proposed Development, based on a figure of £5,000 per MW of wind and £500 per MW of solar of installed generating capacity.

At this stage, figures are indicative and subject to a number of factors, including the dependence of installed generating capacity on available technology and turbine and solar panel procurement.

While this benefit package is a voluntary contribution by the Applicant, its benefits are not a material planning consideration.

The OnWPS (2022) states that:

> *"The Scottish Government remains committed to the principles of a just transition to a net zero economy, and that means ensuring that communities across Scotland feel the benefits of this transition. Community benefit and shared ownership can be transformational for the communities who host renewable developments, and we must ensure that industry continue to deliver on these expectations."*

The Applicant is keen to explore interest in part community shared ownership in the Proposed Development. This would provide an opportunity for the communities around the site to invest in the Proposed Development.

Consumer Savings

The RenewableUK (2019) report on quantifying the benefits of onshore wind identifies that the deployment of onshore wind to replace gas led generation could reduce electricity costs by 7% by 2035. The Proposed Development would make a contribution (albeit minor) to this saving.

Tourism and Recreation Effects

Evidence on the Effect of Wind Farms on Tourism and Recreation

There have been a number of research exercises completed regarding the effect of wind farms on tourism and recreation. A summary of the most relevant and highly regarded research is included in this sub-section.

The Economic Impacts of Wind Farms on Scottish Tourism study by Glasgow Caledonian University (Glasgow Caledonian University, 2008) is one of the first studies on the impacts of wind farms on tourism in Scotland.

It included a literature review, an intercept survey of tourists currently in the studied areas, an internet survey, and a GIS study on the effect on accommodation and an economic analysis of the results.

The study covered the areas of Caithness and Sutherland, Perth Kinross and Stirling, Dumfries and Galloway, and the Scottish Borders.

The literature review, which particularly considered international studies, found that:

- There is little evidence of negative outcomes in sensitive areas, as they generally don't have wind farms approved;
- Although a significant number of individuals reported a loss of value, some thought that they enhanced the landscape;
- In Denmark, an established wind farm market, turbines are seen as a positive impact on the landscape;
- Hostility to wind farms decreases over time; and
- There is no evidence to suggest serious negative economic impacts of wind farms on tourists.

The research presented findings from a number of surveys, the review of secondary research suggests that on average around 91.3% of tourists surveyed were not discouraged from visiting an area containing a wind farm, when reviewing more recent and Scottish based results the figure is nearer 95%.

Overall, the study concluded that; "…*the findings from both primary and secondary research relating to the actual and potential tourism impact of wind farms indicate that there will be neither an overall decline in the number of tourists visiting an area nor any overall financial loss in tourism-related earnings as a result of a wind farm development.*"

The subsequent report from the Economy, Energy and Tourism Committee (Scottish Parliament, 2012) presented a number of findings, including the following points in regard to the relationship between renewable energy targets and tourism objectives:

> *'While some strongly held localised and anecdotal opinion exists, the Committee has seen no empirical evidence which demonstrates that the*

tourism industry in Scotland will be adversely affected by the wider deployment of renewable energy projects, particularly onshore and offshore wind."

The report also found:

"Whilst care always needs to be taken in terms of the planning process and decisions on the siting of individual projects in areas popular with tourists and in our rural and wild land areas, no one has provided the Committee with evidence, as opposed to opinion."

A 2012 report commissioned by the Scottish Government (ClimateXChange, 2012) subsequently found that the findings of the Glasgow Caledonian University report were robust, and that there had been no adverse effect on tourism in the areas considered in the original report.

Since the study by Glasgow Caledonian University was produced in 2012, there has been a significant growth in both the installed capacity of onshore wind energy in Scotland and the tourism economy. In 2024, there was 10.1GW of installed onshore wind energy in Scotland (Scottish Government, 2025).

If there were to be negative impacts for the tourism sector associated with the development of onshore wind energy, they would have become apparent in this time period; however, this is not the case.

In 2012, an inquiry was held by the Scottish Parliament's Economy, Energy and Tourism Committee into the achievability of the Scottish Government's renewable energy targets, which included a review of some of the evidence presented above. In the final report, entitled Report on the Achievability of the Scottish Government's Renewable Energy Targets (Scottish Parliament Economy, Energy and Tourism Committee, 2012).

The committee concluded that:

"Several witnesses made assertions that there would be a negative impact on Scotland's tourism industry from renewable developments. However, these assertions were contradicted by research evidence from VisitScotland and others. Whilst care always needs to be taken in terms of the planning process and decisions on the siting of individual projects in areas popular with tourists and in our more rural and remote rural areas, no witness has provided the Committee with robust, empirical evidence, as opposed to anecdotal comment and opinion, that tourism is being negatively affected by the development of renewable projects. However, given the importance of this issue, the Committee recommends that VisitScotland and the Scottish Government continue to gather, and take account of, evidence from visitors to Scotland."

BiGGAR Economics published research (2021) into the relationship between the onshore wind and tourism sectors in Scotland. This study was undertaken to find empirical evidence of a relationship between the development of onshore wind farms and the tourism sector in Scotland.

Their analysis of 44 wind farm case studies in Scotland found no evidence of a link between wind farm development and trends in tourism employment.

The analysis of trends at the local authority area level found no overall relationship between the growth in the number of wind turbines and the level of tourism-related employment.

Overall, the research completed to date confirms that the tourism sector is not adversely affected by onshore wind farms. In fact, the tourism sector has continued to grow across Scotland as more wind farms have been developed.

Evidence on the Attitudes of Tourists Regarding Wind Farms

In 2011, VisitScotland commissioned Wind Farm Consumer Research (VisitScotland, 2011) into attitudes of tourists towards wind farms, which surveyed 2,000 people in the UK who had visited Scotland recently and 1,000 people in Scotland.

Although the majority (86-91%) were in agreement about the importance of the natural scenery and landscape, for most of the respondents (80-83%) their decision to stay in the UK for a short holiday would not be affected by the presence of a wind farm. In general, the respondents did not feel that wind farms ruined the tourism experience.

In response to criticism in 2015 that this research was now out of date, VisitScotland indicated that it planned to update the work and in a newspaper article a spokesperson said that:

"VisitScotland supports the drive for renewable energy and recognises the potential of Scotland's vast resource. It is well documented that the vast majority of potential visitors would not be discouraged from visiting Scotland on account of windfarm developments. Windfarms and other renewable energy projects are a part of the landscape in nearly every destination in the world" (The Scotsman, 2015).

A more recent, and regular, piece of research focused on public opinions is issued quarterly by the Department for Energy Security And Net Zero (DESNZ), in their 'Public Attitudes Tracker' (UK Government, 2024).

In Winter 2024, this reported that support for renewable energy like wind, solar and biomass was at 82%. Levels of support have remained between 74% and 85% since the question was first asked in March 2012.

Therefore the significance of any impact is expected to be Negligible and **Not Significant** as per the EIA regulations.

National and Regional Attractions

For the reasons stated in the section above it is anticipated the Proposed Development will not have a negative effect on the footfall of national or reginal attractions.

Perhaps the largest and most notable tourist and recreational asset in Dumfries and Galloway is the Galloway Forest Park. It covers an area of 966km2 and the closest edge of which is located immediately to the northwest of the of the Proposed Development. The Park is known for its scenery, natural landscape, Dark Skies classification, and due to its visitor numbers, is considered an attraction of national importance. The boundary of the Proposed Development is located approximately 18km east of the core Dark Skies area within the Forest Park and 3km from the boundary of the Forest Park.

It is expected that the Proposed Development will have little to no effect on the behaviour of visitors/tourists that use the Park because the Proposed Development is outside the boundary of the Park, and due to its distance from the Core Dark Skies zone and the overall size of the Park. Therefore the significance of any impact is expected to be Negligible and **Not Significant** as per the EIA regulations.

The remaining Regional Attractions, ranging between 10km and 25km from the Proposed Development include:

- Threave Castle and Garden (10km);
- MacLellan's Castle (11km);
- Murray Isles (16km);
- Cairn Holy Chambered Cairns (16km);
- Dundrennan Abbey (17km);
- Orchardton Tower (17km);
- Dalbeattie Forest (19km);
- Carsluith Castle (19km);
- Drumcoltran Tower (21km).

Source: VisitScotland (2025) and HES (2025).

These attractions are not considered to have their main characteristics affected by the Proposed Development. Due to the distance from the Proposed Development it is unlikely that the Proposed Development will affect visitors decisions to visit the attractions.

Additionally, in the case of Threave Castle and Garden, any potential visibility of the Proposed Development is largely screened by woodland. Further information can be found in **Chapter 5 Landscape and Visual**, and **Figure 5-3.**

Therefore, the significance of the effect is expected to be Negligible and **Not Significant** as per the EIA regulations.

Local Attractions

Examples of local Attractions within 10km from the centre of the Proposed Development include:

- Galloway Activity Centre
- Cardoness Castle near Gatehouse of Fleet
- The Mill on the Fleet in Gatehouse of Fleet
- Torhouse Stone Circle;

Source: VisitScotland (2025) and HES (2025).

These attractions are not expected to have their characteristics affected by the Proposed Development as it is unlikely that the Proposed Development will affect visitors decisions to visit the attractions.

Therefore, the effect from the Proposed Development is expected to be Negligible and Not Significant as per the EIA regulations.

Accommodation Providers

The research on wind farms and tourism finds no evidence of adverse impacts on the tourism sector. It is worth noting DECC/RenewableUK research (2012) estimated that the expenditure of workers who visit the local area, at all stages of the wind farm lifecycle can benefit the accommodation and food service sector to the value of around £7,500 per MW constructed.

Therefore, the effect from the Proposed Development is expected to be Negligible to Minor Beneficial and **Not Significant** as per the EIA regulations

Trails and Paths

Core path 'Gatehouse to Glengap' (reference TWYN/18/17) follows the route of the proposed southwestern access track from the entrance to the Site (the junction of the existing forestry track with the B727 to the east of Gatehouse of Fleet) to the point where the proposed access track leaves the route of the existing forestry track to turn north towards the main site infrastructure.

It is anticipated that during the construction of the Proposed Development that access to this core path may be limited for health and safety purposes. Mitigation in the form of public engagement and signage before and during construction is proposed and it is anticipated that upon completion of construction of the Proposed Development that there will be no further impact to this core path. There are alternative routes through the forest which will be signposted during construction.

The Applicant is committed to providing and maintaining public access to the access road network. This includes provision of waymarked trails, signage and interpretation boards as appropriate.

The effect on recreation in the vicinity of the Proposed Development Site is considered Minor Adverse during construction due to the short-term effects on the core path and Negligible during operation and therefore **Not Significant**.

12.5 Assessment of Cumulative Effects

Construction Effects

The cumulative effects of the construction phase of the Proposed Development along with the cumulative sites as listed in Chapter 5: Landscape and Visual, would generate additional construction related spend, employment and GVA.

There is limited wind farm activity within 15km of the Proposed Development with the closest operational wind farm being Blackcraig approximately 19km north of the Proposed Development and the closest in planning wind farm being High Barcaple approximately 3km south of the Proposed Development. However, High Barcaple was consented in 2013 and not constructed, so is likely abandoned.

As more projects come through the planning system there could be increased economic opportunity in terms of cumulative investment and resultant employment impacts as local capacity to take up the opportunities grow.

The addition of the Proposed Development will positively contribute to this and could result in increased beneficial effects in terms of job creation and opportunities for local businesses.

It is anticipated that when considering the schemes cumulatively, there would therefore be a Minor Beneficial effect on the economy at the Local Regional and National Level on socio-economic during construction.

Operational Effects

The cumulative effects of the operational phase of the Proposed Development would generate additional operation related spend, employment and GVA.

As noted above there is limited wind farm activity within 15km of the Proposed Development. However there could be increased economic opportunity due to cumulative investment and resultant employment as local capacity to exploit the opportunities grow as more projects progress through the planning system.

The Proposed Development will positively contribute to job opportunities for local people and businesses. It is anticipated that when considering cumulative schemes, there would be a minor beneficial effect on the economy at the Local, Regional, and National Level during operation.

12.6 Mitigation Measures

Mitigation in the form of public engagement and signage before and during construction is proposed for the 'Gatehouse to Glengap' core path and it is anticipated that upon completion of construction of the Proposed Development that there will be no further impact to this core path.

12.7 Residual Effects

There are no significant adverse effects anticipated for the Proposed Development.

There are potential minor beneficial effects in relation to the development, construction and operational phases of the Proposed Development (including in cumulative terms). These relate to employment and GVA, in the context of both local and national economies.

12.8 Summary and Statement of Significance

The socio-economic impact during construction of the Proposed Development was assessed as minor beneficial in the Dumfries and Galloway area, and negligible in Scotland. The annual economic impacts related to operation were assessed as negligible for both study areas. All effects have been assessed as not significant.

Table 12-14 provides a Summary and Statement of Significance.

Table 12-14: Summary and Statement of Significance

Type of Effect	Magnitude of Effect	Summary of Range of Effect	Statement of Significance
Socio-economic – Development Phase – Wind Development			
Spend (UK)	£9,038,760	Negligible (Beneficial)	Not Significant
Spend (Scotland)	£3,801,660	Negligible (Beneficial)	Not Significant
Spend (Dumfries and Galloway)	£743,100	Negligible to Minor (Beneficial)	Not Significant
Employment (UK)	Up to 62 jobs	Negligible (Beneficial)	Not Significant
Employment (Scotland)	Up to 26 jobs	Negligible (Beneficial)	Not Significant
Employment (Dumfries and Galloway)	Up to 5 jobs	Negligible to Minor (Beneficial)	Not Significant
GVA (UK)	£5,649,225	Negligible (Beneficial)	Not Significant
GVA (Scotland)	£2,376,038	Negligible (Beneficial)	Not Significant
GVA (Dumfries and Galloway)	£464,438	Negligible to Minor (Beneficial)	Not Significant
Socio-economic – Construction Phase – Wind Development			
Spend (UK)	£45,001,020	Negligible (Beneficial)	Not Significant
Spend (Scotland)	£29,208,720	Negligible to Minor (Beneficial)	Not Significant
Spend (Dumfries and Galloway)	£6,565,920	Negligible to Minor (Beneficial)	Not Significant
Employment (UK)	Up to 214 jobs	Negligible (Beneficial)	Not Significant
Employment (Scotland)	Up to 139 jobs	Negligible to Minor (Beneficial)	Not Significant
Employment (Dumfries and Galloway)	Up to 31 jobs	Negligible to Minor (Beneficial)	Not Significant
GVA (UK)	£17,595,398	Negligible (Beneficial)	Not Significant
GVA (Scotland)	£11,420,610	Negligible to Minor (Beneficial)	Not Significant
GVA (Dumfries and Galloway)	£2,567,274	Negligible to Minor (Beneficial)	Not Significant
Socio-economic – Operational Phase – Wind Development			

Type of Effect	Magnitude of Effect	Summary of Range of Effect	Statement of Significance
Spend (UK)	£4,047,180	Negligible (Beneficial)	Not Significant
Spend (Scotland)	£2,908,500	Negligible (Beneficial)	Not Significant
Spend (Dumfries and Galloway)	£1,290,480	Negligible (Beneficial)	Not Significant
Employment (UK)	Up to 14 jobs	Negligible (Beneficial)	Not Significant
Employment (Scotland)	Up to 10 jobs	Negligible (Beneficial)	Not Significant
Employment (Dumfries and Galloway)	Up to 4 jobs	Negligible (Beneficial)	Not Significant
GVA (UK)	£2,055,967	Negligible (Beneficial)	Not Significant
GVA (Scotland)	£1,477,518	Negligible (Beneficial)	Not Significant
GVA (Dumfries and Galloway)	£655,564	Negligible (Beneficial)	Not Significant
Tourism and Recreation			
Local Attractions	Attractions are not expected to have their characteristics affected by the Proposed Development. Therefore, minimal / very little effect	Negligible	Not Significant
Trails and Paths	During the construction phase of the Proposed Development access to the 'Gatehouse to Glengap' core path may be limited for health and safety purposes. It is anticipated that upon construction of the Proposed Development there will be no further impact to this core path.	Minor adverse	Not Significant

12.9 References

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